

Date: Sat, 20 Nov 93 04:30:33 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V93 #87
To: Ham-Space

Ham-Space Digest Sat, 20 Nov 93 Volume 93 : Issue 87

Today's Topics:

ORBS\$316.2L.AMSAT
ORBS\$316.MICRO.AMSAT
ORBS\$316.MISC.AMSAT
ORBS\$316.OSCAR.AMSAT
ORBS\$316.WEATH.AMSAT
SAT Code on the NET
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STS-Plus or Code available

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 15 Nov 1993 11:43:00 MST
From: saimiri.primate.wisc.edu!caen!destroyer!nntp.cs.ubc.ca!unixg.ubc.ca!
kakwa.ucs.ualberta.ca!ersys!adec23!ve6mgs!usenet@ames.arpa
Subject: ORBS\$316.2L.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$0RBS-316.N
2Line Orbital Elements 316.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH, TX November 12, 1993
BID: \$ORBS-316.N

DECODE 2-LINE ELSESETS WITH THE FOLLOWING KEY:

1 AAAAAAU 00 0 0 BBBB . BBBB BBBB . CCC CCCC 00000-0 00000-0 0 0 DDDZ

2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

A0-10

1 14129U 83058B 93304.58449144 -.00000081 00000-0 10000-3 0 2086
2 14129 27.1748 358.4423 6020940 126.4893 305.1053 2.05881853 78069

U0-11

1 14781U 84021B 93313.58249069 .00000229 00000-0 42927-4 0 6110
2 14781 97.7981 333.4777 0010810 254.3694 105.6328 14.69080500518069

RS-10/11

1 18129U 87054A 93314.04939054 .00000017 00000-0 11670-4 0 8119
2 18129 82.9214 130.8225 0010360 275.4234 84.5738 13.72325356319844

A0-13

1 19216U 88051B 93313.91272759 -.00000211 00000-0 10000-4 0 8126
2 19216 57.8912 284.9332 7213964 328.0558 3.5561 2.09724845 41418

F0-20

1 20480U 90013C 93310.07362541 -.00000005 00000-0 14874-4 0 6071
2 20480 99.0217 139.2984 0541030 125.0547 240.2545 12.83221816175512

A0-21

1 21087U 91006A 93314.29055835 .00000084 00000-0 82657-4 0 3674
2 21087 82.9398 304.7020 0035176 337.0887 22.8703 13.74528243139502

RS-12/13

1 21089U 91007A 93313.61484132 .00000056 00000-0 53208-4 0 6119
2 21089 82.9251 174.2800 0030580 1.6907 358.4344 13.74029689138495

ARSENE

1 22654U 93031B 93312.79592387 -.00000046 00000-0 10000-3 0 2081
2 22654 1.4077 114.0599 2932748 160.6003 214.5238 1.42203069 2633

U0-14

1 20437U 90005B 93314.26240544 .00000128 00000-0 57654-4 0 9113
2 20437 98.6068 36.8706 0011455 111.4215 248.8190 14.29802927198303

A0-16

1 20439U 90005D 93314.25650448 .00000093 00000-0 43829-4 0 7110
2 20439 98.6135 37.8762 0011873 112.5374 247.7066 14.29859897198314

D0-17

1 20440U 90005E 93314.72182474 .00000108 00000-0 49637-4 0 7113
2 20440 98.6156 38.5937 0011919 110.1078 250.1390 14.29997154198392

W0-18

1 20441U 90005F 93314.27363549 .00000092 00000-0 43527-4 0 7123
2 20441 98.6152 38.1661 0012426 111.7995 248.4510 14.29974899198337

L0-19

1 20442U 90005G 93314.26623889 .00000107 00000-0 48991-4 0 7115
2 20442 98.6160 38.3657 0012902 111.6029 248.6529 14.30067157198345

U0-22

1 21575U 91050B 93313.78644466 .00000117 00000-0 46604-4 0 4111
2 21575 98.4598 27.4629 0006935 224.2634 135.7989 14.36863544121573

KO-23

1 22077U 92052B 93314.21490842 .00000000 00000-0 10000-3 0 3084
 2 22077 66.0804 18.4482 0004639 338.0608 22.0210 12.86281812 58628

AO-27

1 22825U 93061C 93305.38322237 .00000057 00000-0 31218-4 0 2082
 2 22825 98.6783 18.2116 0008754 149.2634 210.9045 14.27587035 5170

IO-26

1 22826U 93061D 93305.66096033 .00000076 00000-0 39017-4 0 2093
 2 22826 98.6791 18.4934 0009019 149.5441 210.6266 14.27689613 5227

KO-25

1 22830U 93061H 93314.69145093 .00000111 00000-0 52532-4 0 2112
 2 22830 98.5800 27.0255 0012337 94.9544 265.3046 14.28015541 6518

NOAA-9

1 15427U 84123A 93300.72651427 .00000099 00000-0 62608-4 0 6087
 2 15427 99.0865 343.0970 0014906 151.8994 208.2999 14.13555759457494

NOAA-10

1 16969U 86073A 93308.02577200 .00000107 00000-0 53892-4 0 5086
 2 16969 98.5151 318.8770 0012448 270.5362 89.4395 14.24841200370532

MET-2/17

1 18820U 88005A 93313.86326152 .00000060 00000-0 48384-4 0 2105
 2 18820 82.5401 83.0499 0017920 77.7053 282.6113 13.84696783292003

MET-3/2

1 19336U 88064A 93313.98312645 .00000043 00000-0 10000-3 0 2102
 2 19336 82.5385 118.8020 0017396 88.4059 271.9055 13.16962219254409

NOAA-11

1 19531U 88089A 93307.95823027 .00000139 00000-0 84844-4 0 4080
 2 19531 99.1482 286.6377 0012789 46.5585 313.6658 14.12928630263406

MET-2/18

1 19851U 89018A 93314.44174536 .00000042 00000-0 31952-4 0 2111
 2 19851 82.5186 318.3186 0015511 116.9458 243.3286 13.84348503237428

MET-3/3

1 20305U 89086A 93313.78275180 .00000043 00000-0 10000-3 0 9124
 2 20305 82.5475 62.1477 0016698 110.3082 249.9836 13.16023732194255

MET-2/19

1 20670U 90057A 93314.71352062 .00000015 00000-0 79036-5 0 7110
 2 20670 82.5501 22.0091 0017060 42.7604 317.4880 13.84180249170390

FY-1/2

1 20788U 90081A 93314.27490495 .00000352 00000-0 25587-3 0 8161
 2 20788 98.8528 336.2622 0014224 264.8255 95.1288 14.01329924163048

MET-2/20

1 20826U 90086A 93314.40511387 .00000040 00000-0 31266-4 0 7107
 2 20826 82.5262 320.0564 0012856 307.6374 52.3617 13.83563412157505

MET-3/4

1 21232U 91030A 93311.55017164 .00000043 00000-0 10000-3 0 6133
 2 21232 82.5434 326.2919 0013431 27.8915 332.2926 13.16456437122196

NOAA-12

1 21263U 91032A 93308.09045315 .00000189 00000-0 93717-4 0 8155
 2 21263 98.6458 335.5750 0012543 165.4607 194.6943 14.22328054128523

MET-3/5

1 21655U 91056A 93313.85451209 .00000043 00000-0 10000-3 0 6115
2 21655 82.5506 271.6301 0014550 26.1377 334.0477 13.16825241107591

MET-2/21

1 22782U 93055A 93314.66191362 .00000093 00000-0 79632-4 0 2106
2 22782 82.5507 19.6100 0023265 115.4347 244.9226 13.82991020 9889

MIR

1 16609U 86017A 93314.97077396 .00004226 00000-0 55300-4 0 5720
2 16609 51.6183 202.0455 0005693 23.2148 336.9078 15.59529397 30542

HUBBLE

1 20580U 90037B 93307.41913862 .00000906 00000-0 78090-4 0 3593
2 20580 28.4692 246.8298 0004679 70.9135 289.1966 14.92902547192330

GRO

1 21225U 91027B 93314.39830284 .00016953 00000-0 18182-3 0 2202
2 21225 28.4634 313.5049 0075239 9.9355 350.2723 15.58504747 23130

UARS

1 21701U 91063B 93309.31219655 -0.00002650 00000-0 -22264-3 0 4119
2 21701 56.9841 336.0504 0005602 88.9850 271.1633 14.96217444117417

POSAT

1 22829U 93 61 G 93289.11726978 .00000072 00000-0 37231-4 0 2042
2 22829 98.6763 2.0610 0010043 184.4594 175.6498 14.27975951 2862

/EX

Date: Mon, 15 Nov 1993 11:36:00 MST

From: saimiri.primate.wisc.edu!caen!destroyer!nntp.cs.ubc.ca!unixg.ubc.ca!

kakwa.ucs.ualberta.ca!ersys!adec23!ve6mgs!usenet@ames.arpa

Subject: ORBS\$316.MICRO.AMSAT

To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-316.D
Orbital Elements 316.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
FROM WA5QGD FORT WORTH, TX November 12, 1993

BID: \$ORBS-316.D

TO ALL RADIO AMATEURS BT

Satellite: U0-14

Catalog number: 20437

Epoch time: 93314.26240544

Element set: 911

Inclination: 98.6068 deg

RA of node: 36.8706 deg

Eccentricity: 0.0011455

Arg of perigee: 111.4215 deg

Mean anomaly: 248.8190 deg

Mean motion: 14.29802927 rev/day
Decay rate: 1.28e-06 rev/day^2
Epoch rev: 19830
Checksum: 295

Satellite: A0-16
Catalog number: 20439
Epoch time: 93314.25650448
Element set: 711
Inclination: 98.6135 deg
RA of node: 37.8762 deg
Eccentricity: 0.0011873
Arg of perigee: 112.5374 deg
Mean anomaly: 247.7066 deg
Mean motion: 14.29859897 rev/day
Decay rate: 9.3e-07 rev/day^2
Epoch rev: 19831
Checksum: 335

Satellite: D0-17
Catalog number: 20440
Epoch time: 93314.72182474
Element set: 711
Inclination: 98.6156 deg
RA of node: 38.5937 deg
Eccentricity: 0.0011919
Arg of perigee: 110.1078 deg
Mean anomaly: 250.1390 deg
Mean motion: 14.29997154 rev/day
Decay rate: 1.08e-06 rev/day^2
Epoch rev: 19839
Checksum: 311

Satellite: W0-18
Catalog number: 20441
Epoch time: 93314.27363549
Element set: 712
Inclination: 98.6152 deg
RA of node: 38.1661 deg
Eccentricity: 0.0012426
Arg of perigee: 111.7995 deg
Mean anomaly: 248.4510 deg
Mean motion: 14.29974899 rev/day
Decay rate: 9.2e-07 rev/day^2
Epoch rev: 19833
Checksum: 325

Satellite: L0-19

Catalog number: 20442
Epoch time: 93314.26623889
Element set: 711
Inclination: 98.6160 deg
RA of node: 38.3657 deg
Eccentricity: 0.0012902
Arg of perigee: 111.6029 deg
Mean anomaly: 248.6529 deg
Mean motion: 14.30067157 rev/day
Decay rate: 1.07e-06 rev/day^2
Epoch rev: 19834
Checksum: 304

Satellite: U0-22
Catalog number: 21575
Epoch time: 93313.78644466
Element set: 411
Inclination: 98.4598 deg
RA of node: 27.4629 deg
Eccentricity: 0.0006935
Arg of perigee: 224.2634 deg
Mean anomaly: 135.7989 deg
Mean motion: 14.36863544 rev/day
Decay rate: 1.17e-06 rev/day^2
Epoch rev: 12157
Checksum: 334

Satellite: K0-23
Catalog number: 22077
Epoch time: 93314.21490842
Element set: 308
Inclination: 66.0804 deg
RA of node: 18.4482 deg
Eccentricity: 0.0004639
Arg of perigee: 338.0608 deg
Mean anomaly: 22.0210 deg
Mean motion: 12.86281812 rev/day
Decay rate: .00000000 rev/day^2
Epoch rev: 5862
Checksum: 255

Satellite: A0-27
Catalog number: 22825
Epoch time: 93305.38322237
Element set: 208
Inclination: 98.6783 deg
RA of node: 18.2116 deg
Eccentricity: 0.0008754

Arg of perigee: 149.2634 deg
Mean anomaly: 210.9045 deg
Mean motion: 14.27587035 rev/day
Decay rate: 5.7e-07 rev/day^2
Epoch rev: 517
Checksum: 300

Satellite: I0-26
Catalog number: 22826
Epoch time: 93305.66096033
Element set: 209
Inclination: 98.6791 deg
RA of node: 18.4934 deg
Eccentricity: 0.0009019
Arg of perigee: 149.5441 deg
Mean anomaly: 210.6266 deg
Mean motion: 14.27689613 rev/day
Decay rate: 7.6e-07 rev/day^2
Epoch rev: 522
Checksum: 311

Satellite: K0-25
Catalog number: 22830
Epoch time: 93314.69145093
Element set: 211
Inclination: 98.5800 deg
RA of node: 27.0255 deg
Eccentricity: 0.0012337
Arg of perigee: 94.9544 deg
Mean anomaly: 265.3046 deg
Mean motion: 14.28015541 rev/day
Decay rate: 1.11e-06 rev/day^2
Epoch rev: 651
Checksum: 267

/EX

Date: Mon, 15 Nov 1993 11:41:00 MST
From: saimiri.prmate.wisc.edu!caen!destroyer!nntp.cs.ubc.ca!unixg.ubc.ca!
kakwa.ucs.ualberta.ca!ersys!adec23!ve6mgs!usenet@ames.arpa
Subject: ORBS\$316.MISC.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-316.M
Orbital Elements 316.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH, TX November 12, 1993
BID: \$0RBS-316.M
TO ALL RADIO AMATEURS BT

Satellite: MIR

Catalog number: 16609
Epoch time: 93314.97077396
Element set: 572
Inclination: 51.6183 deg
RA of node: 202.0455 deg
Eccentricity: 0.0005693
Arg of perigee: 23.2148 deg
Mean anomaly: 336.9078 deg
Mean motion: 15.59529397 rev/day
Decay rate: 4.226e-05 rev/day^2
Epoch rev: 3054
Checksum: 314

Satellite: HUBBLE

Catalog number: 20580
Epoch time: 93307.41913862
Element set: 359
Inclination: 28.4692 deg
RA of node: 246.8298 deg
Eccentricity: 0.0004679
Arg of perigee: 70.9135 deg
Mean anomaly: 289.1966 deg
Mean motion: 14.92902547 rev/day
Decay rate: 9.06e-06 rev/day^2
Epoch rev: 19233
Checksum: 335

Satellite: GRO

Catalog number: 21225
Epoch time: 93314.39830284
Element set: 220
Inclination: 28.4634 deg
RA of node: 313.5049 deg
Eccentricity: 0.0075239
Arg of perigee: 9.9355 deg
Mean anomaly: 350.2723 deg
Mean motion: 15.58504747 rev/day
Decay rate: 1.6953e-04 rev/day^2
Epoch rev: 2313
Checksum: 290

Satellite: UARS

Catalog number: 21701
Epoch time: 93309.31219655
Element set: 411
Inclination: 56.9841 deg
RA of node: 336.0504 deg
Eccentricity: 0.0005602
Arg of perigee: 88.9850 deg
Mean anomaly: 271.1633 deg
Mean motion: 14.96217444 rev/day
Decay rate: -2.650e-05 rev/day^2
Epoch rev: 11741
Checksum: 279

Satellite: POSAT
Catalog number: 22829
Epoch time: 93289.11726978
Element set: 204
Inclination: 98.6763 deg
RA of node: 2.0610 deg
Eccentricity: 0.0010043
Arg of perigee: 184.4594 deg
Mean anomaly: 175.6498 deg
Mean motion: 14.27975951 rev/day
Decay rate: 7.2e-07 rev/day^2
Epoch rev: 286
Checksum: 317

/EX

Date: Mon, 15 Nov 1993 11:34:00 MST
From: saimiri.primate.wisc.edu!caen!destroyer!nntp.cs.ubc.ca!unixg.ubc.ca!
kakwa.ucs.ualberta.ca!ersys!adec23!ve6mgs!usenet@ames.arpa
Subject: ORBS\$316.OSCAR.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-316.0
Orbital Elements 316.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM WA5QGD FORT WORTH, TX November 12, 1993
BID: \$ORBS-316.0
TO ALL RADIO AMATEURS BT

Satellite: A0-10
Catalog number: 14129
Epoch time: 93304.58449144

Element set: 208
Inclination: 27.1748 deg
RA of node: 358.4423 deg
Eccentricity: 0.6020940
Arg of perigee: 126.4893 deg
Mean anomaly: 305.1053 deg
Mean motion: 2.05881853 rev/day
Decay rate: -8.1e-07 rev/day^2
Epoch rev: 7806
Checksum: 297

Satellite: U0-11
Catalog number: 14781
Epoch time: 93313.58249069
Element set: 611
Inclination: 97.7981 deg
RA of node: 333.4777 deg
Eccentricity: 0.0010810
Arg of perigee: 254.3694 deg
Mean anomaly: 105.6328 deg
Mean motion: 14.69080500 rev/day
Decay rate: 2.29e-06 rev/day^2
Epoch rev: 51806
Checksum: 312

Satellite: RS-10/11
Catalog number: 18129
Epoch time: 93314.04939054
Element set: 811
Inclination: 82.9214 deg
RA of node: 130.8225 deg
Eccentricity: 0.0010360
Arg of perigee: 275.4234 deg
Mean anomaly: 84.5738 deg
Mean motion: 13.72325356 rev/day
Decay rate: 1.7e-07 rev/day^2
Epoch rev: 31984
Checksum: 288

Satellite: A0-13
Catalog number: 19216
Epoch time: 93313.91272759
Element set: 812
Inclination: 57.8912 deg
RA of node: 284.9332 deg
Eccentricity: 0.7213964
Arg of perigee: 328.0558 deg
Mean anomaly: 3.5561 deg

Mean motion: 2.09724845 rev/day
Decay rate: -2.11e-06 rev/day^2
Epoch rev: 4141
Checksum: 307

Satellite: F0-20
Catalog number: 20480
Epoch time: 93310.07362541
Element set: 607
Inclination: 99.0217 deg
RA of node: 139.2984 deg
Eccentricity: 0.0541030
Arg of perigee: 125.0547 deg
Mean anomaly: 240.2545 deg
Mean motion: 12.83221816 rev/day
Decay rate: -5.0e-08 rev/day^2
Epoch rev: 17551
Checksum: 267

Satellite: A0-21
Catalog number: 21087
Epoch time: 93314.29055835
Element set: 367
Inclination: 82.9398 deg
RA of node: 304.7020 deg
Eccentricity: 0.0035176
Arg of perigee: 337.0887 deg
Mean anomaly: 22.8703 deg
Mean motion: 13.74528243 rev/day
Decay rate: 8.4e-07 rev/day^2
Epoch rev: 13950
Checksum: 309

Satellite: RS-12/13
Catalog number: 21089
Epoch time: 93313.61484132
Element set: 611
Inclination: 82.9251 deg
RA of node: 174.2800 deg
Eccentricity: 0.0030580
Arg of perigee: 1.6907 deg
Mean anomaly: 358.4344 deg
Mean motion: 13.74029689 rev/day
Decay rate: 5.6e-07 rev/day^2
Epoch rev: 13849
Checksum: 298

Satellite: ARSENE

Catalog number: 22654
Epoch time: 93312.79592387
Element set: 208
Inclination: 1.4077 deg
RA of node: 114.0599 deg
Eccentricity: 0.2932748
Arg of perigee: 160.6003 deg
Mean anomaly: 214.5238 deg
Mean motion: 1.42203069 rev/day
Decay rate: -4.6e-07 rev/day^2
Epoch rev: 263
Checksum: 280

/EX

Date: Mon, 15 Nov 1993 11:39:00 MST
From: saimiri.primate.wisc.edu!caen!destroyer!nntp.cs.ubc.ca!unixg.ubc.ca!
kakwa.ucs.ualberta.ca!ersys!adec23!ve6mgs!usenet@ames.arpa
Subject: ORBS\$316.WEATH.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-316.W
Orbital Elements 316.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH, TX November 12, 1993
BID: \$ORBS-316.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 93300.72651427
Element set: 608
Inclination: 99.0865 deg
RA of node: 343.0970 deg
Eccentricity: 0.0014906
Arg of perigee: 151.8994 deg
Mean anomaly: 208.2999 deg
Mean motion: 14.13555759 rev/day
Decay rate: 9.9e-07 rev/day^2
Epoch rev: 45749
Checksum: 353

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 93308.02577200

Element set: 508
Inclination: 98.5151 deg
RA of node: 318.8770 deg
Eccentricity: 0.0012448
Arg of perigee: 270.5362 deg
Mean anomaly: 89.4395 deg
Mean motion: 14.24841200 rev/day
Decay rate: 1.07e-06 rev/day^2
Epoch rev: 37053
Checksum: 298

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 93313.86326152
Element set: 210
Inclination: 82.5401 deg
RA of node: 83.0499 deg
Eccentricity: 0.0017920
Arg of perigee: 77.7053 deg
Mean anomaly: 282.6113 deg
Mean motion: 13.84696783 rev/day
Decay rate: 6.0e-07 rev/day^2
Epoch rev: 29200
Checksum: 293

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 93313.98312645
Element set: 210
Inclination: 82.5385 deg
RA of node: 118.8020 deg
Eccentricity: 0.0017396
Arg of perigee: 88.4059 deg
Mean anomaly: 271.9055 deg
Mean motion: 13.16962219 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 25440
Checksum: 300

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 93307.95823027
Element set: 408
Inclination: 99.1482 deg
RA of node: 286.6377 deg
Eccentricity: 0.0012789
Arg of perigee: 46.5585 deg
Mean anomaly: 313.6658 deg

Mean motion: 14.12928630 rev/day
Decay rate: 1.39e-06 rev/day^2
Epoch rev: 26340
Checksum: 329

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 93314.44174536
Element set: 211
Inclination: 82.5186 deg
RA of node: 318.3186 deg
Eccentricity: 0.0015511
Arg of perigee: 116.9458 deg
Mean anomaly: 243.3286 deg
Mean motion: 13.84348503 rev/day
Decay rate: 4.2e-07 rev/day^2
Epoch rev: 23742
Checksum: 302

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 93313.78275180
Element set: 912
Inclination: 82.5475 deg
RA of node: 62.1477 deg
Eccentricity: 0.0016698
Arg of perigee: 110.3082 deg
Mean anomaly: 249.9836 deg
Mean motion: 13.16023732 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 19425
Checksum: 296

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 93314.71352062
Element set: 711
Inclination: 82.5501 deg
RA of node: 22.0091 deg
Eccentricity: 0.0017060
Arg of perigee: 42.7604 deg
Mean anomaly: 317.4880 deg
Mean motion: 13.84180249 rev/day
Decay rate: 1.5e-07 rev/day^2
Epoch rev: 17039
Checksum: 262

Satellite: FY-1/2

Catalog number: 20788
Epoch time: 93314.27490495
Element set: 816
Inclination: 98.8528 deg
RA of node: 336.2622 deg
Eccentricity: 0.0014224
Arg of perigee: 264.8255 deg
Mean anomaly: 95.1288 deg
Mean motion: 14.01329924 rev/day
Decay rate: 3.52e-06 rev/day^2
Epoch rev: 16304
Checksum: 314

Satellite: MET-2/20
Catalog number: 20826
Epoch time: 93314.40511387
Element set: 710
Inclination: 82.5262 deg
RA of node: 320.0564 deg
Eccentricity: 0.0012856
Arg of perigee: 307.6374 deg
Mean anomaly: 52.3617 deg
Mean motion: 13.83563412 rev/day
Decay rate: 4.0e-07 rev/day^2
Epoch rev: 15750
Checksum: 269

Satellite: MET-3/4
Catalog number: 21232
Epoch time: 93311.55017164
Element set: 613
Inclination: 82.5434 deg
RA of node: 326.2919 deg
Eccentricity: 0.0013431
Arg of perigee: 27.8915 deg
Mean anomaly: 332.2926 deg
Mean motion: 13.16456437 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 12219
Checksum: 275

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 93308.09045315
Element set: 815
Inclination: 98.6458 deg
RA of node: 335.5750 deg
Eccentricity: 0.0012543

Arg of perigee: 165.4607 deg
Mean anomaly: 194.6943 deg
Mean motion: 14.22328054 rev/day
Decay rate: 1.89e-06 rev/day^2
Epoch rev: 12852
Checksum: 306

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 93313.85451209
Element set: 611
Inclination: 82.5506 deg
RA of node: 271.6301 deg
Eccentricity: 0.0014550
Arg of perigee: 26.1377 deg
Mean anomaly: 334.0477 deg
Mean motion: 13.16825241 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 10759
Checksum: 276

Satellite: MET-2/21
Catalog number: 22782
Epoch time: 93314.66191362
Element set: 210
Inclination: 82.5507 deg
RA of node: 19.6100 deg
Eccentricity: 0.0023265
Arg of perigee: 115.4347 deg
Mean anomaly: 244.9226 deg
Mean motion: 13.82991020 rev/day
Decay rate: 9.3e-07 rev/day^2
Epoch rev: 988
Checksum: 282

/EX

Date: 19 Nov 93 17:24:38 GMT
From: elroy.jpl.nasa.gov!swrinde!emory!europa.eng.gtefsd.com!library.ucla.edu!
agate!dog.ee.lbl.gov!newshub.nosc.mil!nosc!suned1!sslxt1!kss@decwrl.dec.com
Subject: SAT Code on the NET
To: ham-space@ucsd.edu

Everyone is offering elements but I can't do anything without
some software. I am a supporter of AMSAT but money is a little
tight this year. Is there some SAT source code available that I can

use to run on my SUN workstation?

kss@suned1.NSWSES.Navy.MIL kss@suned1.uucp
Any statements / opinions made here are mine, alone, not the Navy's.
HAVE A GOOD ONE!

Date: 17 Nov 1993 11:34:25 -0600

From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!
vixen.cso.uiuc.edu!moe.ksu.ksu.edu!nbc.ksu.ksu.edu!news@network.ucsd.edu
Subject: STS-Plus
To: ham-space@ucsd.edu

I recently bought the STS-Plus sattelite tracking program, and I was wondering if anyone else out there uses this program...Also, is there any way that the program will tell you when a good pass is going overhead??? One more thing. If anyone out there has an up to date listing of all the sattelites carrying Ham Radio signals with the uplinks and downlinks, this would also be greatly appreciated.

Replies via E-mail please. I don't read this group very often.

Tnx.

73's DE

	\		.---/ \ / / \ /	Jeremy Utley			
	\			/	\ \ /	1400 Univ. DR.	
	\			/		/ \	Manhattan, KS
	\		.-/-		/ \		66502

Internet:cbr600@matt.ksu.ksu.edu Bitnet:cbr600@ksuvvm Packet:N0YAX@N00ER.KS.USA

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Date: 19 Nov 93 17:21:38 GMT

From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!howland.reston.ans.net!agate!
dog.ee.lbl.gov!newshub.nosc.mil!nosc!suned1!sslxt1!kss@decwrl.dec.com
Subject: STS-Plus or Code available
To: ham-space@ucsd.edu

How do you like the STS-Plus program? Is there some source code on the internet that I could use on my SUN workstation? I am a supporter of AMSAT but money is a little tight this year.

kss@suned1.NSWSES.Navy.MIL kss@suned1.uucp
Any statements / opinions made here are mine, alone, not the Navy's.
HAVE A GOOD ONE!

End of Ham-Space Digest V93 #87
